

## WE CLAIM:

1. A method for treating alopecia or promoting hair growth in an animal, which comprises administering to said animal an effective amount of a pipecolic acid derivative.
2. The method of claim 1, wherein the pipecolic acid derivative has an affinity for an FKBP-type immunophilin.
3. The method of claim 2, wherein the FKBP-type immunophilin is FKBP-12.
4. The method of claim 1, wherein the pipecolic acid derivative is immunosuppressive.
5. The method of claim 1, wherein the pipecolic acid derivative is non-immunosuppressive.
6. The method of claim 1, wherein the pipecolic acid derivative is Way-124,666.
7. The method of claim 1, wherein the pipecolic acid derivative is rapamycin.
8. The method of claim 1, wherein the pipecolic acid derivative is Rap-Pa.

9. The method of claim 1, wherein the pipecolic acid derivative is SLB-506.

10. The method of claim 1, wherein the pipecolic acid derivative is selected from the group consisting of:

4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;

10 4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)acryloyl]hexahydro-2-pyridinecarboxylate;

15 4-(4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-trimethoxyphenyl)propanoyl]hexahydro-2-pyridinecarboxylate;

4-(4-methoxyphenyl)butyl (2S)-1-[2-oxo-2-(3,4,5-trimethoxyphenyl)acetyl]hexahydro-2-pyridinecarboxylate;

20 3-cyclohexylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

3-phenylpropyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

25 3-(3,4,5-trimethoxyphenyl)propyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(1R)-2,2-dimethyl-1-phenethyl-3-butenyl (2S)-1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(1*R*) -1,3-diphenylpropyl (2*S*) -1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(1*R*) -1-cyclohexyl-3-phenylpropyl (2*S*) -1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

5 (1*S*) -1,3-diphenylpropyl (2*S*) -1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

(1*S*) -1-cyclohexyl-3-phenylpropyl (2*S*) -1-(3,3-dimethyl-2-oxopentanoyl)hexahydro-2-pyridinecarboxylate;

10 (22*aS*) -15,15-dimethylperhydropyrido[2,1-c] [1,9,4]dioxazacyclononadecine-1,12,16,17-tetraone;

(24*aS*) -17,17-dimethylperhydropyrido[2,1-c] [1,9,4]dioxazacycloheicosine-1,14,18,19-tetraone;

15 ethyl 1-(2-oxo-3-phenylpropanoyl)-2-piperidinecarboxylate;

ethyl 1-pyruvoyl-2-piperidinecarboxylate;

ethyl 1-(2-oxobutanoyl)-2-piperidinecarboxylate;

ethyl 1-(3-methyl-2-oxobutanoyl)-2-piperidinecarboxylate;

20 (24*aS*) -17,17-dimethylperhydropyrido[2,1-c] [1,9,4]dioxazacyclononadecine-1,12,16,17-tetraone;

ethyl 1-(4-methyl-2-oxopentanoyl)-2-piperidinecarboxylate;

ethyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

25 ethyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

4-[2-(ethyloxycarbonyl)piperidino]-2,2-dimethyl-3,4-dioxobutyl acetate;

- 
- ethyl 1-[2-(2-hydroxytetrahydro-2H-2-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- ethyl 1-[2-(2-methoxytetrahydro-2H-2-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- 5        ethyl 1-[2-(1-hydroxycyclohexyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- ethyl 1-[2-(1-methoxycyclohexyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- 10      ethyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;
- ethyl 1-(2-oxo-2-piperidinoacetyl)-2-piperidinecarboxylate;
- ethyl 1-[2-(3,4-dihydro-2H-6-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- 15      ethyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;
- ethyl 1-(4-methyl-2-oxo-1-thioxopentyl)-2-piperidinecarboxylate;
- 20      3-phenylpropyl 1-(2-hydroxy-3,3-dimethylpentanoyl)-2-piperidinecarboxylate;
- (1R)-1-phenyl-3-(3,4,5-trimethoxyphenyl)propyl 1-(3,3-dimethylbutanoyl)-2-piperidinecarboxylate;
- (1R)-1,3-diphenylpropyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;
- 25      3-(3,4,5-trimethoxyphenyl)propyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;
- 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-

tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylic acid;

methyl 1-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-

5 tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyran-1-yl)-2-oxoacetyl)-2-piperidinecarboxylate;

isopropyl 1 - ( 2 - [ ( 2 R , 3 R , 6 S ) - 6 -  
 [(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-

12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

benzyl 1-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-

15 pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

1-phenylethyl 1-(2-[(2*R*,3*R*,6*S*)-6-[(2*S*,3*E*,5*E*,7*E*,9*S*,11*R*)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2*H*-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

(Z)-3-phenyl-2-propenyl 1-(2-[(2*R*,3*R*,6*S*)-6-[(2*S*,3*E*,5*E*,7*E*,9*S*,11*R*)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2*H*-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

3-((3,4-dimethoxyphenyl)propyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-

methyltetrahydro-2*H*-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

5           *N*2 - b e n z y l - 1 - ( 2 - [ ( 2 R , 3 R , 6 S ) - 6 -  
              [(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-  
              12-oxo-3,5,7-tridecatrienyl] - 2 - hydroxy - 3 -  
              methyltetrahydro-2*H*-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

10           *N*2 - ( 3 - phenylpropyl ) - 1 - ( 2 - [ ( 2 R , 3 R , 6 S ) - 6 -  
              [(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-  
              12-oxo-3,5,7-tridecatrienyl] - 2 - hydroxy - 3 -  
              methyltetrahydro-2*H*-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;

15           ( *E* ) - 3 - ( 3 , 4 - dichlorophenyl ) - 2 - propenyl      1 - ( 3 , 3 -  
              dimethyl-2-oxopentanoyl ) - 2 - piperidinecarboxylate;

20           ( *E* ) - 3 - ( 3 , 4 , 5 - trimethoxyphenyl ) - 2 - propenyl      1 - ( 3 , 3 -  
              dimethyl-2-oxopentanoyl ) - 2 - piperidinecarboxylate;

             ( *E* ) - 3 - phenyl - 2 - propenyl      1 - ( 3 , 3 - dimethyl - 2 -  
              oxopentanoyl ) - 2 - piperidinecarboxylate;

25           ( *E* ) - 3 - ( ( 3 - ( 2 , 5 - dimethoxy ) - phenylpropyl ) phenyl ) - 2 -  
              propenyl      1 - ( 3 , 3 - dimethyl - 2 - oxopentanoyl ) - 2 -  
              piperidinecarboxylate;

             ( *E* ) - 3 - ( 1 , 3 - benzodioxol - 5 - yl ) - 2 - propenyl      1 - ( 3 , 3 -  
              dimethyl - 2 - oxopentanoyl ) - 2 - piperidinecarboxylate;

25           4 - ( 4 - methoxyphenyl ) butyl      1 - ( 2 - oxo - 2 -  
              phenylacetyl ) - 2 - piperidinecarboxylate;

             3 - phenylpropyl      1 - ( 2 - oxo - 2 - phenylacetyl ) - 2 -  
              piperidinecarboxylate;

             3 - ( 3 - pyridyl ) propyl      1 - ( 2 - oxo - 2 - phenylacetyl ) - 2 -

piperidinecarboxylate;

3-(3-pyridyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

5 4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

1-(4-methoxyphenethyl)-4-phenylbutyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

10 3-(2,5-dimethoxyphenyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

3-(1,3-benzodioxol-5-yl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

15 1-phenethyl-3-phenylpropyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;

4-(4-methoxyphenyl)butyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;

3-cyclohexylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;

20 3-phenylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;

3-cyclohexylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

25 3-phenylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-

2-oxobutanoyl)-2-piperidinecarboxylate; and  
pharmaceutically acceptable salts, esters, and  
solvates thereof.

5           11. A pharmaceutical composition which  
comprises:

- (i) an effective amount of a pipecolic acid derivative for treating alopecia or promoting hair growth in an animal; and  
10           (ii) a pharmaceutically acceptable carrier.

15           12. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative has an affinity for an FKBP-type immunophilin.

16           13. The pharmaceutical composition of claim 12,  
wherein the FKBP-type immunophilin is FKBP-12.

20           14. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is immunosuppressive.

25           15. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is non-immunosuppressive.

26           16. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is Way-124,666.

17. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is rapamycin.

18. The pharmaceutical composition of claim 11,  
5 wherein the pipecolic acid derivative is Rap-Pa.

19. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is SLB-506.

10 20. The pharmaceutical composition of claim 11,  
wherein the pipecolic acid derivative is selected from  
the group consisting of:

15 4 - (4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-  
trimethoxyphenyl)acetyl]hexahydro-2-  
pyridinecarboxylate;

4 - (4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-  
15 trimethoxyphenyl)acryloyl]hexahydro-2-  
pyridinecarboxylate;

20 4 - (4-methoxyphenyl)butyl (2S)-1-[2-(3,4,5-  
trimethoxyphenyl)propanoyl]hexahydro-2-  
pyridinecarboxylate;

4 - (4-methoxyphenyl)butyl (2S)-1-[2-oxo-2-(3,4,5-  
15 trimethoxyphenyl)acetyl]hexahydro-2-  
pyridinecarboxylate;

25 3-cyclohexylpropyl (2S)-1-(3,3-dimethyl-2-  
oxopentanoyl)hexahydro-2-pyridinecarboxylate;

3-phenylpropyl (2S)-1-(3,3-dimethyl-2-  
15 oxopentanoyl)hexahydro-2-pyridinecarboxylate;

"

3 - (3, 4, 5-trimethoxyphenyl)propyl (2*S*) -1 - (3, 3 -  
 dimethyl - 2 - oxopentanoyl) hexahydro - 2 -  
 pyridinecarboxylate;

5 (1*R*) -2, 2-dimethyl-1-phenethyl-3-butenyl (2*S*) -1 -  
 (3, 3 - dimethyl - 2 - oxopentanoyl) hexahydro - 2 -  
 pyridinecarboxylate;

(1*R*) -1, 3-diphenylpropyl (2*S*) -1 - (3, 3-dimethyl-2 -  
 oxopentanoyl) hexahydro - 2 - pyridinecarboxylate;

10 (1*R*) -1-cyclohexyl-3-phenylpropyl (2*S*) -1 - (3, 3 -  
 dimethyl - 2 - oxopentanoyl) hexahydro - 2 -  
 pyridinecarboxylate;

(1*S*) -1, 3-diphenylpropyl (2*S*) -1 - (3, 3-dimethyl-2 -  
 oxopentanoyl) hexahydro - 2 - pyridinecarboxylate;

15 (1*S*) -1-cyclohexyl-3-phenylpropyl (2*S*) -1 - (3, 3 -  
 dimethyl - 2 - oxopentanoyl) hexahydro - 2 -  
 pyridinecarboxylate;

(22*aS*) -15, 15-dimethylperhydropyrido[2, 1 -  
 c] [1, 9, 4] dioxazacyclononadecine-1, 12, 16, 17-tetraone;

20 (24*aS*) -17, 17-dimethylperhydropyrido[2, 1 -  
 c] [1, 9, 4] dioxazacycloheicosine-1, 14, 18, 19-tetraone;

ethyl 1 - (2 - oxo - 3 - phenylpropanoyl) - 2 -  
 piperidinecarboxylate;

ethyl 1-pyruvoyl-2-piperidinecarboxylate;

ethyl 1-(2-oxobutanoyl)-2-piperidinecarboxylate;

25 ethyl 1 - (3 - methyl - 2 - oxobutanoyl) - 2 -  
 piperidinecarboxylate;

ethyl 1 - (4 - methyl - 2 - oxopentanoyl) - 2 -  
 piperidinecarboxylate;

- ethyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;
- ethyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;
- 5           4-[2-(ethyloxycarbonyl)piperidino]-2,2-dimethyl-3,4-dioxobutyl acetate;
- ethyl 1-[2-(2-hydroxytetrahydro-2H-2-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- 10          ethyl 1-[2-(2-methoxytetrahydro-2H-2-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- ethyl 1-[2-(1-hydroxycyclohexyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- ethyl 1-[2-(1-methoxycyclohexyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- 15          ethyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;
- ethyl 1-(2-oxo-2-piperidinoacetyl)-2-piperidinecarboxylate;
- 20          ethyl 1-[2-(3,4-dihydro-2H-6-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;
- ethyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;
- ethyl 1-(4-methyl-2-oxo-1-thioxopentyl)-2-piperidinecarboxylate;
- 25          3-phenylpropyl 1-(2-hydroxy-3,3-dimethylpentanoyl)-2-piperidinecarboxylate;  
(1*R*)-1-phenyl-3-(3,4,5-trimethoxyphenyl)propyl 1-(3,3-dimethylbutanoyl)-2-piperidinecarboxylate;

(1*R*)-1,3-diphenylpropyl 1-(benzylsulfonyl)-2-piperidinecarboxylate;

3 - (3 , 4 , 5 - trimethoxyphenyl)propyl 1 -  
 (benzylsulfonyl) -2 - piperidinecarboxylate:

5           1-[(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl]-2-piperidinecarboxylic acid:

10                   methyl 1-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-  
2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-  
tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-  
pyranyl]-2-oxoacetyl]-2-piperidinecarboxylate:

isopropyl 1 - ( 2 - [ ( 2 R , 3 R , 6 S ) - 6 -  
 [(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-  
 12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-  
 methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-  
 piperidinecarboxylate;

benzyl 1-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-  
2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-  
20 tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-  
pyranyl)-2-oxoacetyl]-2-piperidinecarboxylate;

1-phenylethyl      1-(2-[*(2R,3R,6S)*-6-  
*[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-  
 12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-  
 methyltetrahydro-2H-2-pyranyl]-2-oxoacetyl)-2-  
 piperidinecarboxylate;*

(Z)-3-phenyl-2-propenyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-

- 12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;
- 3-(3,4-dimethoxyphenyl)propyl 1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;
- N2-benzyl-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;
- N2-(3-phenylpropyl)-1-(2-[(2R,3R,6S)-6-[(2S,3E,5E,7E,9S,11R)-2,13-dimethoxy-3,9,11-trimethyl-12-oxo-3,5,7-tridecatrienyl]-2-hydroxy-3-methyltetrahydro-2H-2-pyranyl)-2-oxoacetyl)-2-piperidinecarboxylate;
- (E)-3-(3,4-dichlorophenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;
- (E)-3-(3,4,5-trimethoxyphenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;
- (E)-3-phenyl-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;
- (E)-3-((3-(2,5-dimethoxy)-phenylpropyl)phenyl)-2-propenyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;
- (E)-3-(1,3-benzodioxol-5-yl)-2-propenyl 1-(3,3-

dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-oxo-2-phenylacetyl)-2-phenylacetyl)-2-piperidinecarboxylate;  
3-phenylpropyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
5  
3-(3-pyridyl)propyl 1-(2-oxo-2-phenylacetyl)-2-piperidinecarboxylate;  
3-(3-pyridyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
10  
4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
15  
1-(4-methoxyphenethyl)-4-phenylbutyl 1-(3,3-dimethyl-2-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(2,5-dimethoxyphenyl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
3-(1,3-benzodioxol-5-yl)propyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
20  
1-phenethyl-3-phenylpropyl 1-(3,3-dimethyl-2-oxopentanoyl)-2-piperidinecarboxylate;  
4-(4-methoxyphenyl)butyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;  
25  
3-cyclohexylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;  
3-phenylpropyl 1-(2-cyclohexyl-2-oxoacetyl)-2-piperidinecarboxylate;  
3-cyclohexylpropyl 1-(3,3-dimethyl-2-

oxobutanoyl)-2-piperidinecarboxylate;

3-phenylpropyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

4-(4-methoxyphenyl)butyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate;

4-phenyl-1-(3-phenylpropyl)butyl 1-(3,3-dimethyl-2-oxobutanoyl)-2-piperidinecarboxylate; and

pharmaceutically acceptable salts, esters, and solvates thereof.